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10/734,948	12/11/2003	Ichiro Kamimura	JCLA12519	1438
7590	12/11/2006		EXAMINER	
J.C. Patents Suite 250 4 Venture Irvine, CA 92618			DOERRLER, WILLIAM CHARLES	
			ART UNIT	PAPER NUMBER
			3744	

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/734,948  
Filing Date: December 11, 2003  
Appellant(s): KAMIMURA ET AL.

MAILED  
DEC 11 2006  
Group 3700

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Jiawei Huang  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 13 March 2006.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Claimed Subject Matter***

The summary of claimed subject matter contained in the brief is correct.

**(6) *Grounds of Rejection to be Reviewed on Appeal***

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) *Claims Appendix***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) *Evidence Relied Upon***

5,092,138	RADERMACHER ET AL.	3-1992
5,736,063	RICHARD ET AL.	4-1998
6,178,761 B1	KARL	1-2001

6,631,621 B2

VANDERWOUDE ET AL. 10-2003

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3 are rejected under 35 U.S.C. 102(b). This rejection is set forth in a prior Office Action, mailed on 07 December 2004.

Claims 4-8 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on 07 December 2004

**(10) Response to Argument**

In regard to claims 1-3:

Claim 1 is directed to a composition of matter, specifically a non-azeotropic refrigerant composition comprising carbon dioxide and at least one kind of combustible refrigerant and having a temperature glide. Claim 2 requires the combustible refrigerant of claim 1 to be a hydrocarbon. Claim 3 requires the combustible refrigerant of claim 1 to be a HFC refrigerant. The instant application expressly describes examples of compositions in paragraph [0017] of the written description, which recites, "the non-azeotropic refrigerant mixture of the present invention comprises carbon dioxide and at least one kind of combustible refrigerants. The combustible refrigerant can be hydrocarbon series combustible refrigerant (such as ethane, propane, propylene, butane, isobutene and pentane, etc.) or HFC series combustible refrigerant (such as R32, R152a, and R14, etc.)"

Richard et al. disclose a non-azeotropic refrigerant having a temperature glide comprising carbon dioxide and a combustible refrigerant that can be either a

hydrocarbon or an HFC refrigerant. In particular, example 27 from Table 6 discloses a refrigerant mixture comprising carbon dioxide and HFC-32 (i.e. R32). Example 51 discloses a refrigerant mixture comprising carbon dioxide and propane. Since the refrigerant mixtures disclosed by Richard et al. are compositionally identical to the ones of the present invention, the reference of Richard et al. is considered to anticipate the claims.

Although Appellant does not dispute that Richard et al. disclose refrigerant mixtures comprising carbon dioxide and at least one kind of combustible refrigerant as claimed, Appellant asserts that claims 1-3 are improperly rejected under 35 U.S.C. 102(b) because Richard et al. fails to expressly disclose that the temperature glide of the mixture “produces a first temperature range between a beginning temperature and an intermediate temperature in an evaporation process for use as a refrigeration area, and a second temperature range from the intermediate temperature to a temperature at an ending of the evaporation of the evaporation process for use as a cold storage area,” as recited by claim 1. This recitation, however, merely reflects an intended use for the claimed composition derived from its properties, and it fails to provide any compositional distinction between the refrigerant mixture being claimed and the refrigerant mixtures disclosed by Richard et al. In other words, while Appellant has devised a method for using a property of a non-azeotropic refrigerant mixture to produce two temperature ranges in order to increase refrigeration performance, the claimed refrigerant mixture itself is not novel. Although Richard et al. do not explicitly disclose the recited use for the refrigerant mixture, an anticipatory prior art reference need not disclose the utility of

a composition as long as it identically discloses the claimed composition. *In re Schoenwald*, 964 F.2d 1122, 22 USPQ2d 1671 (Fed. Cir. 1992). Furthermore, the discovery of a new property of a prior art composition does not render the old composition patentably new to the discoverer. *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Appellant further argues that Richard et al. do not teach the equivalent structural design of the refrigerator having a “refrigeration area” and a “cold storage area.” Again, the recitation of the refrigeration area and the cold storage area does nothing to distinguish the actual composition being claimed from the compositions disclosed by Richard et al. and is merely indicative of the composition’s intended use. Accordingly, since Richard et al. disclose refrigerant mixtures that are compositionally identical to the present invention, it is respectfully submitted that the rejection of claims 1-3 under 35 U.S.C. 102 is proper.

In regard to claims 4-8:

Claims 4-8 ultimately depend from claim 1 and are directed to refrigerating cycles in which the refrigerant mixture of claim 1 is circulated. Claims 4, 7/4, and 8/7/4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Radermacher et al. in view of Richard et al. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karl in view of Richard et al. Claims 7/5 and 8/7/5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karl in view of Richard et al. as applied to claim 5 and further in view of Richard et al. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karl in view of Richard et al. and VanderWoude et al. Claims 7/6 and 8/7/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karl in view of

Richard et al. and VanderWoude et al. as applied to claim 6 and further in view of Radermacher et al.

The prior art references of Radermacher et al., Karl, and VanderWoude et al. demonstrate that all the features of the claimed refrigerating cycles minus the specific refrigerant mixture are already known in the art, which Appellant has not disputed. Accordingly, claims 4-8 are considered unpatentable over the combination of these references with the teachings of Richard et al. who disclose the claimed refrigerant mixture. Appellant, however, asserts that claims 4-8 are improperly rejected under 35 U.S.C. 103(a) because Appellant maintains that neither Richard et al. nor the other cited references disclose that the refrigerant mixture temperature glide produces "the refrigeration area" and "the cold storage area" as recited in claim 1. As discussed above, this recitation reflects an intended use for the refrigerant mixture but fails to compositionally distinguish the claimed refrigerant mixture from the refrigerant mixtures taught by Richard et al. Therefore it is respectfully submitted that the presented combinations of references contain all the elements of claims 4-8 and the rejections of these claims under 35 U.S.C. 103(a) are proper.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

**(12) Conclusion**

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

William C Doerrler  
Primary Examiner  
Art Unit 3744



WCD  
September 21, 2006

Conferees

Cheryl J. Tyler   
William C. Doerrler 

(Original Appeal conference attended by Richard Leung, who prepared the original

Examiner's Answer- He has since left the Office)

J.C. Patents  
Suite 250  
4 Venture  
Irvine, CA 92618